



AIRLOK®

Section 07262 Fluid-Applied Air and Vapor Barrier MANUFACTURER'S GUIDE SPECIFICATION

PART 1 – GENERAL

1.01 GENERAL

POLY WALL AIRLOK® is a fluid-applied air/vapor barrier, surface treatment for application on concrete and concrete masonry interior and exterior surfaces. POLY WALL AIRLOK® should not be used on the exterior or in cold climates due to the vapor impermeable properties. When used on exterior in warm climates, cover with paint in a color of choice. Paint applied to the surface shall contain a bonding additive (such as Imperial Wil-Bond Liquid Surface Preparation) to obtain successful adhesion. POLY WALL AIRLOK® is a surface barrier with excellent properties that retard or prevent air, water and water vapor transmission. POLY WALL AIRLOK'S® chemical resistance to algae, bacteria, alkali and acid conditions in the environment suggest other uses.

1.02 RELATED SECTION

Concrete – Section 03300
Masonry – Section 04500
Fluid-Applied Air & Vapor Barrier – Section 07262

1.03 REFERENCE DOCUMENTS

Reference shall be to the following documents:

- A. Master specifications for Fluid-Applied Air and Vapor Barriers Section 07262.
- B. ACI 515.1R: American Concrete Institute (ACI) Guide to the Use of Waterproofing, Dampproofing, Protective and Decorative Barrier Systems for Concrete (Revised 1982).
- C. ACI 530.1/ASCE 6–92: American Concrete Institute (ACI) Building Code Requirements for Masonry Structures, Specification for Masonry Structures and Related Commentary.
- D. ASTM Standards, as referred throughout this Guide Specification.

1.04 SYSTEM DESCRIPTION

Surface Treatment System: A properly-applied application of AIRLOK® provides air, water and vapor infiltration and exfiltration protection and minor crack bridging ability. AIRLOK® is a fluid-applied, single-component, non-elastomeric membrane with a formula to help reduce problems associated with cold-weather applications; ultra-violet radiation (UV) degradation; construction scheduling; poor adhesion; and prolonged wall cure time prior to application. AIRLOK® with ProBan® brings added contact mold-inhibiting properties and is available at extra cost.

1.05 QUALITY ASSURANCE

- A. Manufacturer, Polyguard Products Inc., is a company specializing in POLY WALL surface treatments since 1992.
- B. Contractor shall be a trained installer.

1.06 SUBMITTALS

Submit POLY WALL data and Manufacturer installation recommendations as required in Division 1 –Submittals.

1.07 ENVIRONMENTAL REQUIREMENTS

- A. POLY WALL AIRLOK® shall be applied at temperatures in the range of –20°F to 100°F. Application of POLY WALL AIRLOK® below ambient temperatures of –20°F is not advised.
- B. Application of POLY WALL AIRLOK® at temperatures in the range of –20°F to 32°F shall continue only after the surfaces are free of frost, ice and excess moisture.

1.08 DELIVERY, STORAGE, AND HANDLING

- A. Delivery, storage, and handling of POLY WALL AIRLOK® shall be the responsibility of the installation contractor.
- B. POLY WALL AIRLOK® is to be carefully stored according to the requirements of local authorities. Protect product containers from water, sparks, flames, excessive heat and poor ventilation.



- C. Store POLY WALL AIRLOK® containers out of direct sunlight and in temperatures between –20°F to 100°F. For best results POLY WALL AIRLOK® should be at a temperature above 50°F prior to application. This will help to reduce the material viscosity to a level that will allow the material to be sprayed more consistently.
- D. Ignition sources shall be prohibited from the work-space during application and from the immediate proximity of site drums; trucks; and, if applicable, spray equipment.

1.09 WARRANTY

All POLY WALL products are warranted to be free of manufacturer's defects for a period of five (5) years. Contact Polyguard Products, Inc. for further information.

PART 2 – PRODUCTS

2.01 MANUFACTURER

Approved Manufacturer shall be:

Polyguard Products, Inc.
Ennis, TX 75119
(800) 846-3020
www.poly-wall.com

2.02 MATERIAL

- A. POLY WALL AIRLOK® is a patented, cold-applied thermoplastic surface treatment.
- B. Performance characteristics of POLY WALL AIRLOK® shall be as follows:
 1. Permeability: ASTM E 96 Method B Water Vapor Transmission Typical results 0.45 perms (14 dry mil)
 2. Tumbler Test: Manufacturer's test procedure, available upon request Typical performance excellent.
 3. Adhesion: ASTM C 836–89a Method C 794 Peel after water immersion 22 day standard temperature cure Typical performance exceeds.
 4. Metabolites: Test procedure GSA-PBS 07115. Analysis: chemical and visual Typical performance does not degrade.
 5. Liquid Water Immersion: ASTM D 95 Typical results less than 1% weight.
 6. Degradation Resistance: ASTM E 154 Typical performance excellent.
 7. Chemical Resistance: Resistance to chemicals identified by Manufacturer List available upon request.

PART 3 – EXECUTION

3.01 EXAMINATION

The decision to treat a surface shall be based on anticipated air, moisture and waterproofing needs; exposure conditions, the material to be treated and the transitions needed to complete the system. A single application or multiple lighter applications on the interior surface will retard or prevent air, water and vapor flow through the treated surface. Prior to the application, the surface to receive POLY WALL AIRLOK® shall be inspected by the Owner or Owner's Representative to establish that the surface(s) to be covered are in accordance with contracts of allied trades.

1. By application of POLY WALL AIRLOK®, the POLY WALL Manufacturer and the Qualified Installer do not accept the quality of the surface as to individual components, the structural integrity of its components, and their combination.
2. Surfaces shall be sound, dry, plane and true; free of oil, grease, dust, dirt, excess mortar and laitance in both exposed and unexposed areas to receive application.
3. Surface voids and cracks will require corrective action by the responsible trade.
4. Concrete and CMU to be constructed without integral moisture repellant, and CMU shall be constructed with type-M or type-S mortar in accordance with ASTM C270.
5. Masonry joints are to be completely filled with mortar, tooled and brushed to increase profile and excess mortar on masonry ties must be removed.
6. Parged surfaces are not approved surfaces to be treated with AIRLOK®.

3.02 PREPARATION

- A. **Old Surfaces** must be sound. Surfaces that have been in service (not new) will need to be cleaned with detergents, steam, or commercial degreasing products and acid contamination neutralized. Following cleaning, the surfaces should be rinsed with clean water and the cleanliness verified by a site inspector. Deteriorated concrete needs to be prepared by high-pressure washing, wet abrasive blasting, grinding, or dry abrasive blasting. All existing coatings, deteriorated concrete, and loose aggregate are to be removed until only sound gray concrete remains with a minimum 4-5% surface profile height, a surface pull-off strength value of 175+ PSI, and a minimum 8.0 pH value.
- B. **New Surfaces** must be clean, dust free and dry. Concrete masonry units shall be normal density and joints are to be tooled or struck flush, full free of voids and gaps. Fill all holes and voids with non-shrinking grout. After 3 days of cure time, new concrete masonry are ready to receive the application. No parging.
- C. Clean, dry exterior drywall, glass-faced exterior sheathings and properly primed metal can receive AIRLOK® as a direct application.



- D. Penetrations, voids and holes must be filled and sealed. Large voids in poured concrete, CMU and honeycombs surfaces require a non-shrinking hydraulic grout. When hydraulic cement is installed to fill voids, install and allow to thoroughly dry prior to air barrier application. Control joints, transition assemblies and penetrations shall be treated after AIRLOK® installation to the field surface.

3.03 APPLICATION

- A. **Safety Considerations** – The work areas during application shall be well ventilated and restricted to only qualified installers. The following safety precautions shall apply:

1. Smoking and introduction of flames, sparks, electric arcs, etc. shall not be allowed.
2. Applicators shall wear a NIOSH approved disposable organic vapor respirator. Medical approval shall be obtained for each person who will require a mask, individually fit.
3. A working fire extinguisher, type ABC, shall be available in all vehicles near truck doors and in the work area.
4. All trucks, barrels and spray equipment shall be grounded.

General Application – The following specifications are prescribed for smooth, dense surfaces. As surface porosity increases the coverage rate will decrease. The mil thicknesses and coverage rates are based on good quality tight masonry units, good quality gypsum board surfaces. It is the responsibility of the Qualified Installer to adjust the coverage rates to meet the varying conditions.

- B. The surface treatment shall be applied using brush, roller or airless spray equipment. Use of an airless sprayer with a 4000 PSI stall pressure and a 0.039-inch reversible tip is recommended.
1. Spray-applied POLY WALL shall be thick enough to cover surface, then rolled with 0.5-inch to 0.75-inch nap paint roller. Spray re-application and rolling shall continue in sequence until the desired application rate (wet mils) is obtained. Drying time is dictated by ambient temperature.
 2. On smooth CMU surfaces, POLY WALL AIRLOK® shall be applied to a thickness of 40 square feet per gallon (40 wet mils) such that a continuous film forms to an average 14 dry mil thickness. On more porous CMU surfaces, proper application will result in fewer square feet per gallon, inversely related to texture and porosity of the wall surface. During application spot-checking with a wet mil gauge controls thickness, making samples as close to fresh material application location as safely possible.
 3. Application shall be considered complete after a visual inspection establishes that the surface has been uniformly covered and is

free of voids, thin spots, pinholes and missed areas. Reapplication shall be completed until the surface is approved.

4. All overspray surfaces shall be cleaned using xylol.

- C. Treated walls shall be allowed to dry for 24 to 48 hours. Exact drying time will depend on temperature, wind or air movement conditions as well as surface treatment thickness. Film should be allowed to dry until a finger, firmly pressed on the film surface, no longer leaves an imprint.

- D. Protection of Treated Surfaces:

1. Insulation board or drainage board shall not be installed directly over recent applications until the surface is dry to the touch.
2. Backfilling of concrete and concrete masonry basement walls shall be completed using a protection board for unclean backfill or granular fill in excess of 0.75-inch.
3. Avoid direct application of large amounts of ethyl benzene or aromatic hydrocarbon compounds common to some herbicides and insecticides on surface after application.
4. Paint applied to the surface to promote different color shall contain a bonding additive (such as Imperial Wil-Bond Liquid Surface Preparation) to obtain successful adhesion.

- E. **Detailing** – In most applications, detailing is best performed after spray application. Transitions to windows and door frames, beams, columns, soffits are best completed 24 hours or more after the spray application. This avoids problems associated with overspray and allows for spray coverage of the jambs and openings. The spray coating serves as an excellent primer for the POLY WALL Self-Adhering Flashing or other compatible flashings. When applying POLY WALL Self-Adhering Flashing in cold ambient temperatures, apply Quik Grip Building Envelope Adhesive to the surface of the substrate or the POLY WALL Self-Adhering Flashing to increase adhesion. POLY WALL AIRLOK® can be applied to the wall surface below grade line to provide a footing-to-roof air and moisture barrier. Control joints can be filled with a color matched vapor impermeable caulk.

3.04 FIELD QUALITY CONTROL

The wet thickness of surface treatment applied shall reflect both proper thickness and coverage. Thickness in the wet stage shall be established using a paint thickness gauge. Coverage shall be established by calculating the square footage covered per gallon.

